

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 362 567 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **89116563.1**(51) Int. Cl.⁵: **G01G 21/28**(22) Date of filing: **07.09.89**

(30) Priority: **07.09.88 JP 222528/88**
14.09.88 JP 119754/88 U

(43) Date of publication of application:
11.04.90 Bulletin 90/15

(64) Designated Contracting States:
DE FR GB

(68) Date of deferred publication of the search report:
10.04.91 Bulletin 91/15

(71) Applicant: **ISHIDA SCALES MFG. CO., LTD.**
44, Sanno-cho Syogoin Sakyo-ku
Kyoto-shi Kyoto(JP)

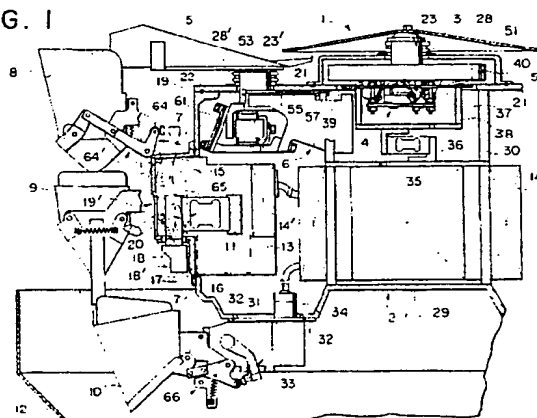
(72) Inventor: **Kitagawa, Kazumi**
423-3, Ogaki Ritto-cho
Kurita-gun Shiga(JP)
Inventor: **Konishi, Satoshi**
1922-284, Noji-cho
Kusatsu-shi Shiga(JP)
Inventor: **Takahashi, Naoki**
3, Minamimiyake-cho Iwakura
Sakyo-ku Kyoto-shi Kyoto(JP)
Inventor: **Tatsuoka, Masahiko**
1373, Kitatsuchiyama Tsuchiyama-cho
Koga-gun Shiga(JP)

(74) Representative: **Zmyj, Erwin, Dipl.-Ing.**
Rosenheimer Strasse 52
W-8000 München 80(DE)

(54) **Waterproof automatic weighing apparatus.**

(57) A waterproof automatic weighing apparatus comprising a case (2) hermetically sealed by means of sealing members (7, 22, 32, 52), internal components (4, 6, 11, 13, 14, 14', 15, 16, 36) lodged in this case (2), and external components (3, 5, 8, 9, 10) arranged outside this case (2). The internal components include weight sensing elements (11, 36), driving sections (13) for opening and closing hopper gates, electromagnetic vibrator sections (4, 6), and a

control unit (14, 14') having an electrical circuit. The external components include a dispersion tabel (3), feed troughs (5), pool hoppers (8), weighing hoppers (9), and, as needed memory hoppers (10). Each of the internal components is hermetically (20, 28, 28', 72) connected to the corresponding external component.

FIG. 1



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 11 6563

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X,Y	US-A-4 526 246 (S.A.PATORAY) * column 1, lines 14 - 24 * * lines 38 - 62; figure 2 * - - -	1,3,4	G 01 G 21/28
X	EP-A-0 035 579 (WIRTH,GALLO & CO.) * page 4, line 22 - page 5, line 17; figures 8-11 * - - -	1	
Y	EP-A-0 075 479 (K.K. ISHIDA KOKI SEISAKUSHO) * page 1, line 26 - page 2, line 19 * * page 8, line 17 - page 9, line 2 * - - -	3,4	
A	EP-A-0 018 656 (SARTORIUS GMBH) * abstract * * page 5, line 23 - page 6, line 3; figure 1 * - - - - -	1,2	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			G 01 G
Place of search		Date of completion of search	Examiner
The Hague		06 February 91	GANCI P.A.
CATEGORY OF CITED DOCUMENTS			
X: particularly relevant if taken alone		E: earlier patent document, but published on, or after the filing date	
Y: particularly relevant if combined with another document of the same category		D: document cited in the application	
A: technological background		L: document cited for other reasons	
O: non-written disclosure		&: member of the same patent family, corresponding document	
P: intermediate document			
T: theory or principle underlying the invention			